

# Ceramic Low Pass Filter

50Ω DC<sup>(1)</sup> to 800 MHz

## LFCN-800+



Generic photo used for illustration purposes only  
CASE STYLE: FV1206

### Maximum Ratings

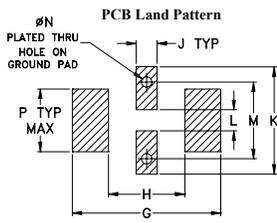
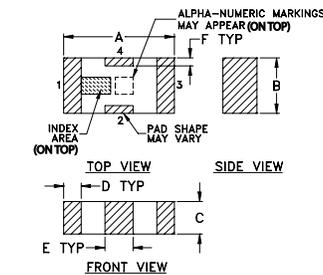
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	9W max. at 25°C

\* Passband rating, derate linearly to 4W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

### Outline Drawing



Suggested Layout, Tolerance to be within ±0.02

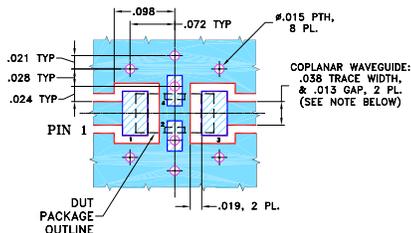
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169
3.20	1.60	0.94	0.51	0.81	0.23	4.29

H	J	K	L	M	N	P	wt
.087	.024	.122	.024	.087	.012	.071	grams
2.21	0.61	3.10	0.61	2.21	0.30	1.80	.020

### Demo Board MCL P/N: TB-270 Suggested PCB Layout (PL-137)



NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- excellent power handling, 9W
- small size
- 5 sections
- temperature stable
- LTCC construction

### Applications

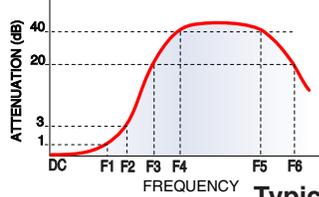
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

### Electrical Specifications<sup>(1,2)</sup> at 25°C

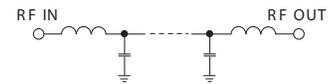
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-800	—	—	1.3	dB
	Freq. Cut-Off	F2	990	—	3.0	—	dB
	VSWR	DC-F1	DC-800	—	1.2	—	:1
Stop Band	Rejection Loss	F3	1400	20	—	—	dB
		F4-F5	1500-2000	—	30	—	dB
	VSWR	F6	4500	—	20	—	dB
		F3-F6	1400-4500	—	20	—	:1

(1) In Applications where DC isolation to ground is required, coupling capacitors are recommended to avoid DC leakage. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.  
(2) Measured on Mini-Circuits Characterization Test Board TB-270.

### Typical Frequency Response

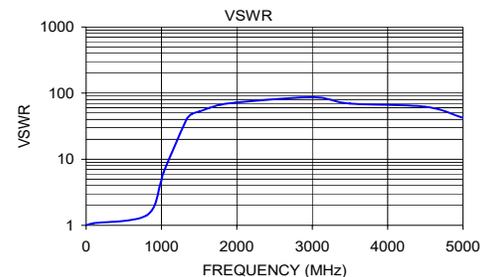
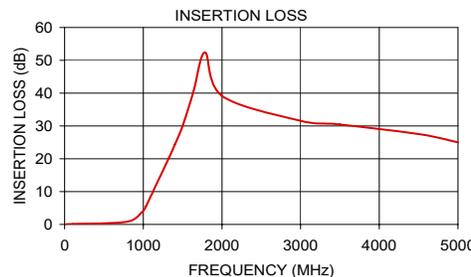


### Electrical Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10.00	0.06	1.01
100.00	0.14	1.07
800.00	0.85	1.41
990.00	3.87	4.47
1030.00	5.38	6.39
1330.00	20.50	39.49
1400.00	24.29	48.26
1500.00	30.05	52.65
1635.00	40.35	59.91
1785.00	52.35	66.82
2000.00	39.14	72.39
3000.00	31.57	86.86
3500.00	30.42	69.49
4500.00	27.52	62.05
5000.00	25.04	42.38



### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

